

## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **LISTING OF CLAIMS:**

1. (Currently Amended) An interferometer, comprising:  
 at least a beamsplitter;[[.]]  
 at least one end reflector for returning beams;[[.]] and  
 a set of reflectors for reflecting the beams between the beamsplitter and the at least one end reflector ~~or the end reflectors, at least some of said set of reflectors being adapted to be rotatable around an axis~~, said set of reflectors comprises a first and a second ~~two~~ angle reflector[[s]], constituted by plane reflectors, and ~~that the~~ said at least one end reflector is ~~or the end reflectors are an~~ a third angle reflector constituted by plane reflectors, and ~~that an angle line of the~~ at least one end reflector is ~~or the angle lines of end reflectors are~~ arranged perpendicular to an angle line of both of the first and second angle reflector[[s]], the first and the second angle reflector being rotatable around an axis.

2. (Currently Amended) An interferometer as set forth in claim 1, wherein each of the angle reflector reflectors is constituted by two plane reflectors, between which is provided an angle ~~typically of about 72-107 degrees, preferably of about 85-95 degrees, and most preferably of 90 degrees.~~

3. (Currently Amended) An interferometer as set forth in claim 1, wherein the beamsplitter and the at least one end reflector ~~or the end reflectors~~ are mounted on a first rigid structure, and ~~that the~~ first and the second angle reflectors are mounted on ~~the~~ a second rigid structure which is adapted to be rotatable around an axis.

4. (Currently Amended) An interferometer as set forth in claim 1, wherein ~~[[,]]~~ said set of reflectors further comprises at least one pair of plane reflectors.

5. (Currently Amended) An interferometer as set forth in claim 4, wherein the pair of plane reflectors ~~has its plane reflectors~~ is arranged in such a way that the beams, coming from the beamsplitter to the pair of plane reflectors, travel by way of the first and the second angle reflectors and hit the at least one end reflector perpendicularly to the angle line of the at least one end reflector, the beams reflected from the at least one end reflector returning over the same direction but laterally shifted back to the beamsplitter.

6. (Currently Amended) An interferometer as set forth in ~~the~~ claim 1, wherein the interferometer is arranged in such a way that

- a beam to be delivered to the interferometer is conductible to the beamsplitter, the beamsplitter being arranged to divide the beam into ~~two beams, namely the~~ a first beam and ~~the~~ a second beam,
- the first beam is ~~arranged to be~~ reflected from the beamsplitter to the first angle reflector and further towards the at least one end reflector, and ~~to return~~ returns from the at least one end reflector over the same direction but laterally shifted back to the beamsplitter,
- the second beam is ~~is arranged to pass~~ passes through the beamsplitter and advances ~~to advance~~ to the second angle reflector and further towards the at least one end reflector, and ~~to return~~ returns over the same direction but laterally shifted back to the beamsplitter, and ~~that~~
- the beamsplitter is arranged to combine the first and second beams returning from the at least one end reflector into ~~for a single beam or a single beam.~~

7. (Currently Amended) An interferometer as set forth in ~~the~~ claim 4, wherein the pair of plane reflectors comprises a first and a second plane reflector, and wherein the interferometer is arranged in such a way that

- a beam to be delivered to the interferometer is conductible to the beamsplitter, the beamsplitter being arranged to divide the beam into ~~two beams, namely the~~ a first beam and ~~the~~ a second beam,
- the first beam is ~~arranged to be~~ reflected from the beamsplitter to the first plane reflector, from the first plane reflector to the first angle reflector, from the first angle reflector towards the at least one end reflector, and ~~to return~~ returns from the at least one end reflector over the same direction but laterally shifted back to the beamsplitter,
- the second beam ~~is arranged to pass~~ passes through the beamsplitter and advances ~~to advance~~ to the second plane reflector and ~~to reflect~~ reflects from the second plane reflector to the second angle reflector, from the second angle reflector towards the at least one end reflector, and ~~to return~~ returns from the at least one end reflector over the same direction but laterally shifted back to the beamsplitter,
- the beamsplitter is arranged to combine the first and the second beams returning from the at least one end reflector ~~for a single beam or~~ into a single beam.

8. (Previously Presented) An interferometer as set forth in claim 1, wherein at least some of the reflectors are produced by replication.

9. (Currently Amended) An interferometer as set forth in claim 8, wherein the first and the second said two angle reflectors are comprised of ~~formed by~~ arranging into a one solid body four plane surfaces arranged in one solid body surface such that ~~the~~ a first two of said plane surfaces are perpendicular to each other and ~~the~~ a third and a fourth of said plane surfaces are perpendicular to each other, and ~~that~~ a reflecting surface is produced to said plane surfaces by replication.

10. (Currently Amended) A method in an interferometer, comprising:  
 wherein guiding optical beams through use of ~~are guided using~~ at ~~least~~ least two angle reflectors, constituted by plane reflectors, by reflecting the optical beams off the at least two angle reflectors; and  
guiding the optical beams reflected from the at least two angle reflectors through use of at least one end reflector, constituted by plane reflectors, by reflecting

the optical beams off the at least one end reflector, and wherein an angle line of the at least one end reflector is ~~or end reflectors are arranged~~ perpendicular to an angle line of both of the at least two angle reflectors.

11. (Currently Amended) An analyzer, comprising:  
 an interferometer~~[[,]]~~ comprising at least a beamsplitter, at least one end reflector for returning beams, and a set of reflectors for reflecting the beams between the beamsplitter and the at least one end reflector ~~or the end reflectors~~, ~~at least some of said set of reflectors being adapted to be rotatable around an axis~~, said set of reflectors comprises a first and a second ~~two~~ angle reflector~~[[s]]~~, constituted by plane reflectors, and said at least one end reflector is ~~or the end reflectors are an~~ a third angle reflector constituted by plane reflectors, and an angle line of the at least one end reflector is ~~or the angle lines of end reflectors are arranged~~ perpendicular to an angle line of both of the first and the second angle reflector~~[[s]]~~, the first and the second angle reflector being rotatable around an axis.

12. (New) An interferometer as set forth in claim 1, wherein each of the angle reflectors is constituted by two plane reflectors, between which is provided an angle of about 85-95 degrees.

13. (New) An interferometer as set forth in claim 1, wherein each of the angle reflectors is constituted by two plane reflectors, between which is provided an angle of about 90 degrees.